

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for pumping fluid comprising:

~~at least one housing, said at least one~~ a housing having an exterior surface and an interior surface, ~~said the interior surface defining a chamber for receiving a plunger and having a fluid input opening and a fluid discharge opening extending between said interior and exterior surfaces, said chamber having a cylindrical shape with~~ chamber having a first end wall and a plunger opening for receiving a plunger; wherein said exterior surface of said at least one housing has a transducer surface between said first end wall and said second end wall, the second end wall, ~~said interior surface and exterior surface define a first thickness and a second thickness, said transducer surface having said second thickness exhibiting measurable deformation upon~~ said having a plunger opening through which a plunger is reciprocal in the chamber to cause fluid to enter the chamber holding a fluid under pressure such that said transducer surface having a first position at which the chamber is at low pressure and a second position at which said chamber is at high pressure; a plunger received in said plunger opening for reciprocating movement in said chamber said reciprocating movement causing fluid movement to enter said chamber through said fluid input opening and out through said a fluid inlet opening and to discharge fluid from the chamber through a fluid discharge opening;

wherein the housing has an integrally formed cavity recessed into its exterior surface to provide a transducer surface which is radially spaced from the interior surface of the housing and which is disposed between said first and second end walls, and, at least one

wherein a strain sensor is affixed to said the transducer surface, said to measure deformation of the housing resulting from differences in fluid pressure within the chamber, the strain sensor producing at least one a first signal upon said indicative of the transducer surface

assuming ~~said~~ a first position when the chamber is at low pressure and ~~at least one producing a second signal upon said~~ indicative of the transducer surface assuming ~~said~~ a second position ~~to function as a integrated~~ when the chamber is at high pressure ~~transducer~~.

2. (Currently Amended) The apparatus of claim 1 wherein ~~said at least one housing the~~ transducer surface is a flat bottom surface ~~capable of deformation upon pressurization of said chamber the cavity~~.

3. (Original) The apparatus of claim 1 wherein said housing has a composition selected from ~~[[the]]~~ metals and metal alloys consisting of titanium, aluminum, and vanadium.

4. (Currently Amended) The apparatus of claim 1 wherein said housing has a composition comprising metal and metal alloy is titanium, aluminum and vanadium alloy 6A14V.

5. (Original) The apparatus of claim 1 wherein said exterior surface of said housing has a cylindrical portion and a half cylindrical portion, said cylindrical portion forming a base for attachment to other apparatus, said half cylindrical portion having a flat planar surface and a half cylindrical surface.

6-9. (Canceled)

10. (Currently Amended) A method of measuring pressure in a pump chamber comprising the steps of providing

~~at least one housing, said at least one housing having an exterior surface and an interior surface, said interior surface defining a chamber for receiving a plunger and having a fluid input opening and a fluid discharge opening extending between said interior and exterior surfaces, said chamber having a cylindrical shape with a first end wall and a plunger opening for receiving a~~

~~plunger; wherein said exterior surface of said at least one housing has a transducer surface between said first end wall and said second end wall, said interior surface and exterior surface define a first thickness and a second thickness, said transducer surface having said second thickness exhibiting measurable deformation upon said chamber holding a fluid under pressure such that said transducer surface having a first position at which the chamber is at low pressure and a second position at which said chamber is at high pressure;~~

~~a plunger received in said plunger opening for reciprocating movement in said chamber said reciprocating movement causing fluid movement to enter said chamber through said fluid input opening and out through said fluid discharge opening; and~~

~~at least one strain sensor affixed to said transducer surface, said strain sensor producing at least one signal upon said transducer surface assuming said first position and at least one signal upon said transducer surface assuming said second position to function as a integrated pressure transducer;~~

a housing according to claim 1 and taking readings of the strain gauge as an indication of pressure in said chamber.